

Work Order ID 133382

Monday, June 08, 2015 3:59:32 PM

133382

Page 1

Item ID: D2933-2 Accept ***N9000040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle RH In, 206
 Start Date: 6/08/15 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 6/08/15 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: ML3 Date: JUN 09 2015 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2933	Rev C

100	HAAS CNC VERTICAL MACHINING #1	0.00							DAS 37 9-89
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100
 HAAS 1
 HAAS CNC vertical machine #1
 Memo
 Program part number and batch number.1-Inspect part number and batch number are programmed correctly.2-Machine Step No 1 of Folio and visually inspect as per dwg D2933 & attached Dimension Sheet 3-Machine Step No 2 of Folio and visually inspect as per

110	CONVENTIONAL MILLING MACHINE	0.00							DAS 37 9-89
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110
 Mill Conv
 Conventional Milling Machine
 Memo
 Machine Keyway and inspect per attached dimension sheet

120	QC1- Inspection performed by CMM	0.00							DAS 40 9-89
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120
 QC
 Quality Control
 Memo
 15/08/10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00				4	0		DAS 20 9-89 15-08-11
130									
QC	Memo	0.00							
Quality Control									
140	Chemical Conversion Coat per QSI005 4.1	0.00				4			15-8-12
140									
HandFinish	Memo	0.01							
Hand Finishing									
150	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00				24	0		15/08/11
150									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 16:15 FINISH TIME: 3269								

DQA: _____ Date: _____



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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							DAS 38 9-89
160						(4)			
QC	Memo	0.00							
Quality Control									AUG 17 2015
170	Identify as per dwg & Stock Location: <u>ST396</u>	0.00							
170									
Packaging	Memo	0.00				(4)	JA		AUG 17 2015
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.01							
Quality Control									

ML5
AUG 17 2015
MS-8.17

DQA: _____ Date: _____



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OTHER : ☐																																																																									

Picklist Print

Monday, June 08, 2015 3:59:32 PM

Page 1

Work Order ID: 133382

133382

Parent Item: D2933-2

D2933-2

Parent Item Name: Saddle RH In, 206

Start Date: 6/08/15

Required Date: 6/08/15

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP: B00.06.26New DWG rev (mpp 2069)EC
IPP Rev:C As per Rev C 07-03-19 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued DAS	Status
D6101-001		Manufactured	No			100	Each	19.0000	1	4		37 9-89	
D6101-001									**				
Saddle Billet													15.06.23

Location

Loc Qty

Loc Code

MAT042

16

129986

16

MAT045

3

125829

3

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
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Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation			Disposition																		
						Completed By															
						Lead hand / Supervisor Approval Verification															
			QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER : ☐																					

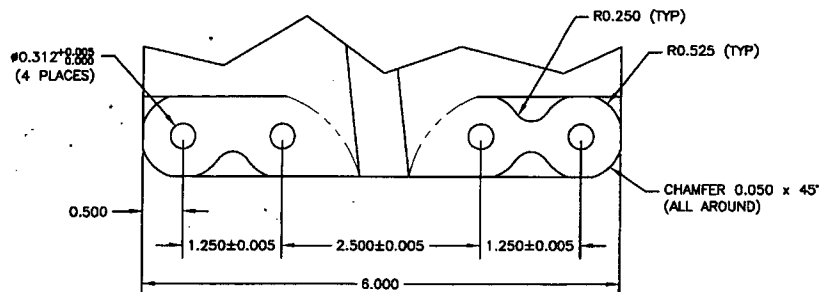
DART AEROSPACE LTD		Work Order: 133382
Description: 206 Saddle, Inboard, Right side		Part Number: D2933-2
Inspection Dwg: D2933 Rev. C		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2933 Rev. C and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
A	0.100	0.140		.121	.122	.121	.123	1	
B	0.100	0.140		.122	.121	.122	.122		
C	0.100	0.140		.123	.124	.125	.124		
D	0.210	0.230		.220	.221	.220	.220		
E	1.245	1.255		1.250	1.250	1.250	1.250		
F	1.245	1.255		1.250	1.250	1.250	1.250		
G	2.495	2.505		2.500	2.500	2.500	2.500		
H	0.510	0.515		.511	.51	.51	.511		
I	1.572	1.582		1.577	1.577	1.577	1.577		
J	2.495	2.505		2.500	2.500	2.500	2.500		
K	0.257	0.262		.257	.257	.257	.257		
L	0.312	0.317		.314	.314	.314	.314		
M	0.235	0.240		.238	.238	.238	.238		
N	0.100	0.140		.121	.122	.123	.122		
O	0.540	0.560		.551	.551	.552	.551		
P	0.490	0.510		.498	.498	.497	.496		
Q	3.715	3.725		3.720	3.720	3.720	3.720		
R	2.470	2.510		2.495	2.493	2.494	2.495		
S	0.240	0.270		.253	.254	.254	.253		
T	0.100	0.180		.180	.180	.180	.180		
U	1.625	1.635		1.630	1.630	1.630	1.630		
V	1.362	1.372		1.367	1.367	1.367	1.367		
W	0.316	0.321		.318	.318	.318	.318		
X	1.125	1.145		1.135	1.134	1.133	1.134		
Y	1.565	1.585	DT8695 A/B	1.574	1.573	1.573	1.574		
Z	0.178	0.198		.188	.188	.188	.188		
AA									
AB									
AC									
AD									
AE									
AF									
AG									
AH									
Accept/Reject									DAS

Measured by: 37 9-89	DAS 40 9-89	Audited by: [Signature] 15/08/11	DAS 20 9-89 15-08-11
Date: 15.07.02		Date: 15/08/11	

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Re-format; Added Dim. X-Y, DT8683, DT8686, DT8690 & DT8695 A/B	KJ/RF	
C	07.03.21	Revised per drawing revision C	KJ/JLM [Signature]	[Signature]

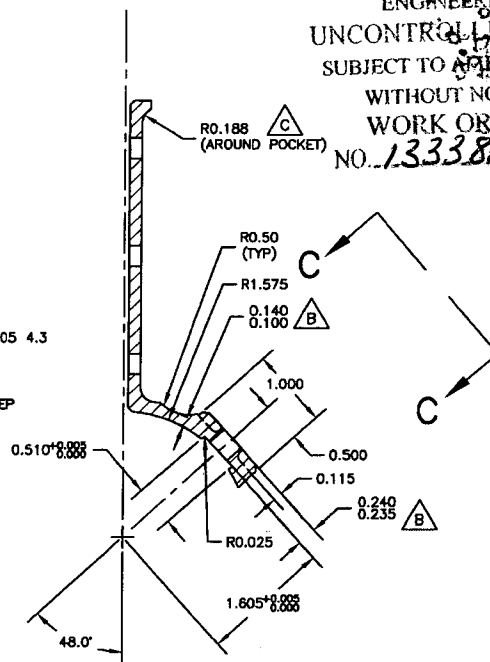


VIEW C-C

D2933-1 LH SADDLE (SHOWN)
D2933-2 RH SADDLE (OPPOSITE)

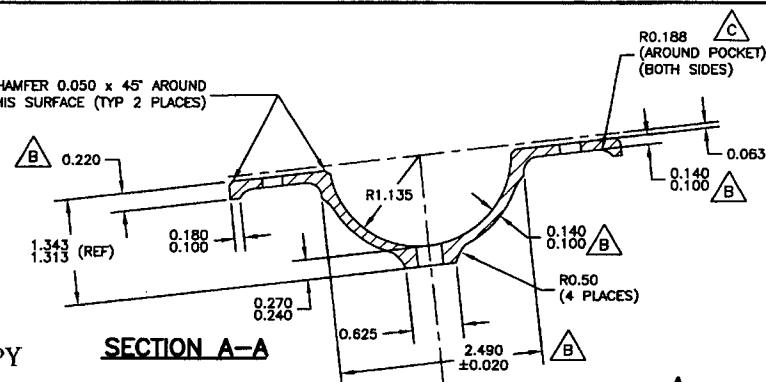
NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D6101-001 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP

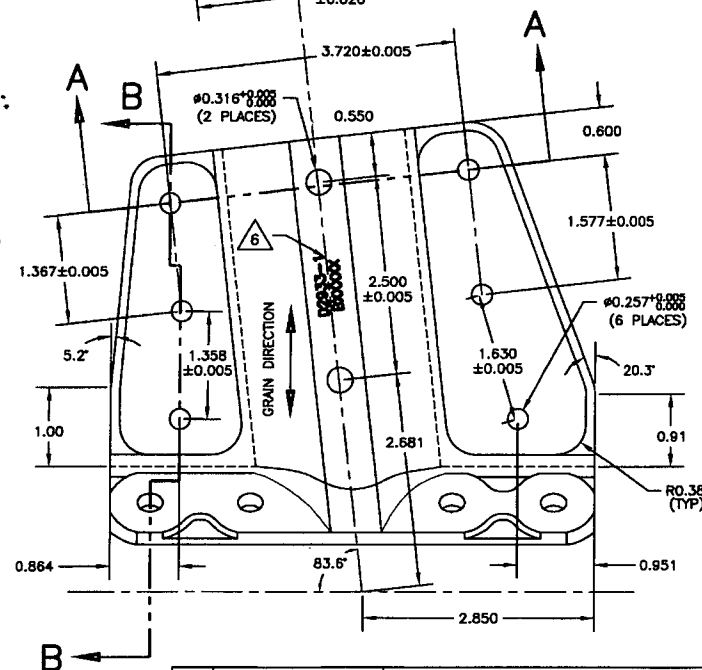


SECTION B-B

CHAMFER 0.050 x 45° AROUND
THIS SURFACE (TYP 2 PLACES)



SECTION A-A



C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED GEOMETRY AND MATERIAL
A	99.10.29	NEW ISSUE
DESIGN	BY	DART DART AEROSPACE USA, INC. BELLEVUE, WA
CHECKED	APPROVED	DRAWING NO. D2933
DATE	06.11.09	TITLE SADDLE INSIDE
		REV. C SHEET 1 OF 1 SCALE 2:3

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OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE USA, INC.

07.02.12



Part Number: D2933-2	Rev: C	- Page 1 -
Description: SADDLE INSIDE	Inspection Dwg: D2933	Work Order: B133382

Item Ref.	Nominal	Tolerance	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
1	0.3120	+0.0050/0.0000	0.3130	0.3129	0.3124	0.3132	
2	0.5000	+0.0100/-0.0100	0.4990	0.4993	0.4994	0.4963	
3	1.2500	+0.0050/-0.0050	1.2506	1.2493	1.2498	1.2499	
4	2.5000	+0.0050/-0.0050	2.4993	2.4995	2.5001	2.5001	
5	1.2500	+0.0050/-0.0050	1.2497	1.2504	1.2500	1.2498	
6	6.0000	+0.0100/-0.0100	6.0034	6.0035	6.0032	6.0028	
7	0.2200	+0.0100/-0.0100	0.2218	0.2216	0.2217	0.2202	
8	1.1350	+0.0100/-0.0100	1.1329	1.1328	1.1330	1.1333	
9	0.0630	+0.0100/-0.0100	0.0598	0.0602	0.0600	0.0609	
10	0.1200	+0.0100/-0.0100	0.1196	0.1197	0.1195	0.1188	
11	1.3280	+0.0150/-0.0150	1.3238	1.3242	1.3241	1.3225	
12	3.7200	+0.0050/-0.0050	3.7210	3.7220	3.7175	3.7154	
13	0.3160	+0.0050/0.0000	0.3163	0.3160	0.3164	0.3169	
14	0.5500	+0.0100/-0.0100	0.5500	0.5503	0.5501	0.5502	
15	0.6000	+0.0100/-0.0100	0.6003	0.5966	0.5997	0.5980	
17	1.5770	+0.0050/-0.0050	1.5768	1.5803	1.5749	1.5765	
17	0.2570	+0.0050/0.0000	0.2581	0.2578	0.2570	0.2588	
18	20.3000	+0.5000/-0.5000	20.2796	20.2628	20.2790	20.2754	
19	1.6300	+0.0050/-0.0050	1.6304	1.6294	1.6306	1.6297	
20	0.9510	+0.0100/-0.0100	0.9550	0.9528	0.9535	0.9517	
21	2.8500	+0.0100/-0.0100	2.8516	2.8523	2.8516	2.8513	
22	83.6000	+0.5000/-0.5000	83.5603	83.5622	83.5579	83.5587	
23	2.6810	+0.0100/-0.0100	2.6814	2.6816	2.6825	2.6817	
24	2.5000	+0.0050/-0.0050	2.4998	2.4995	2.4987	2.4995	
25	0.8640	+0.0100/-0.0100	0.8632	0.8645	0.8654	0.8649	
26	1.3580	+0.0050/-0.0050	1.3578	1.3601	1.3550	1.3555	
27	5.2000	+0.5000/-0.5000	5.1502	5.1374	5.1583	5.1380	
28	1.3670	+0.0050/-0.0050	1.3683	1.3657	1.3686	1.3681	
Ang29	48.000	+0.500/-0.500	47.983	47.969	48.041	48.044	
30	1.6050	+0.0050/0.0000	1.6050	1.6050	1.6053	1.6050	
D31	0.235	+0.005/0.000	0.240	0.240	0.240	0.240	

Measured by:
Mathieu Lamarche

Date:
2015-8-11

Audited by:

Date:



Part Number: D2933-2	Rev: C	- Page 2 -
Description: SADDLE INSIDE	Inspection Dwg: D2933	Work Order: B133382

Item Ref.	Nominal	Tolerance	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
32	0.5000	+0.0100/-0.0100	0.4984	0.4985	0.4980	0.4975	
33	1.5750	+0.0100/-0.0100	1.5721	1.5725	1.5724	1.5733	
34	0.0630	+0.0100/-0.0100	0.0605	0.0612	0.0613	0.0629	
D35	0.050	+0.010/-0.010	0.040	0.040	0.040	0.040	
D36	0.050	+0.010/-0.010	0.040	0.040	0.040	0.040	
D37	0.188	+0.010/-0.010	0.188	0.188	0.188	0.188	
D38	0.120	+0.020/-0.020	0.125	0.126	0.129	0.125	
D39	2.490	+0.020/-0.020	2.494	2.494	2.494	2.494	
D40	0.625	+0.010/-0.010	0.635	0.635	0.635	0.635	
D41	0.255	+0.015/-0.015	0.249	0.250	0.249	0.250	
D42	0.140	+0.040/-0.040	0.140	0.140	0.140	0.140	
D43	0.115	+0.010/-0.010	0.120	0.120	0.120	0.120	
D44	1.000	+0.010/-0.010	1.006	1.006	1.004	1.005	
D45	0.120	+0.020/-0.020	0.120	0.121	0.123	0.120	
D46	0.510	+0.005/0.000	0.512	0.512	0.512	0.512	

Measured by:
Mathieu Lamarche

Date:
2015-8-11

Audited by:

Date: